



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

3

D3391-015
Job Sheet 177481



Part No: D3391-015

Job Qty: 1 ea

Part Name: Aft Tube Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/14/18

Job Tracking No:

Due Date: 6/14/18

Created By: Michelle Gagnon-Donovan

Type: SOLD

Description:

Note: DWG REV J SHEETS 8,10,11 IPP rev A 05.12.13 New issue EC IPP rev B 06.02.09 Dwg @ revD EC IPP rev C 07.03.13 dwg @revF ec IPP rev D 07.10.31 ecn 1053P EC IPP Rev:E ECN 1056 07-11-13 DD verified by: EC IPP Rev:F 08-09-10 revH as per dwg DD verified by:EC IPP Rev:G 11.11.14 AS PER REV.I DD verified by:JLM

Ship Via:

Bill of Materials



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S079230



Part: D3391-015

Job No: 177481

Serial No/Batch: S079230

Revision:

Inspector:

Exp Date: 06/08/2018

Instructions:

Date: 06/08/18

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	6/14/18	6/14/18	0.00	0.00	Start Up Crosstubes		M.D. 2018-06-11
100	Mori Seiki	1 pcs	6/14/18	6/14/18	3.56	5.56	Mori Seiki TL-40		M.D. 2018-06-11
110	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC2-1		M.D. 2018-06-11
120	CNC Vertical Machining	1 pcs	6/14/18	6/14/18	0.00	2.57	HAAS1-3		M.D. 2018-06-11
130	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC2 Machining-2		M.D. 2018-06-11
140	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC8 Machining-2		M.D. 2018-06-11
150	Skidtubes	1 pcs	6/14/18	6/14/18	0.00	2.07	Skidtubes-3		M.D. 2018-06-11
160	CNC Bend Skidtubes	1 pcs	6/14/18	6/14/18	0.00	2.57	CNC Bend Crosstube		M.D. 2018-06-11
170	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC5		M.D. 2018-06-11
180	Skidtubes	1 pcs	6/14/18	6/14/18	0.00	2.07	Skidtubes-4		M.D. 2018-06-11
190	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC5		M.D. 2018-06-11
200	HandFinish	1 pcs	6/14/18	6/14/18	0.00	0.60	HandFinish1		M.D. 2018-06-11
205	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC7-2		M.D. 2018-06-11
210	Skidtubes	1 pcs	6/14/18	6/14/18	0.00	2.07	Skidtubes-4		M.D. 2018-06-11
220	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC5		M.D. 2018-06-11
225	HandFinish	1 pcs	6/14/18	6/14/18	0.00	0.60	HandFinish2		M.D. 2018-06-11
230	SprayPaint	1 pcs	6/14/18	6/14/18	0.00	0.63	Spray Paint		M.D. 2018-06-11
240	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC14		M.D. 2018-06-11
250	HandFinish	1 pcs	6/14/18	6/14/18	0.00	0.60	HandFinish4		M.D. 2018-06-11
260	QC	1 pcs	6/14/18	6/14/18	0.00	0.00	QC5		M.D. 2018-06-11
270	Packaging	1 pcs	6/14/18	6/14/18	0.00	0.00	Packaging3-1		M.D. 2018-06-11
280	QC21-SA	1 Ea	6/14/18	6/14/18	0.00	0.00	QC21		M.D. 2018-06-11

Part Op 100 - Turn as per Folio FA599 Rev: J & Dwg D3391 Rev: J ****REMOVE STEADY REST AND MACHINIG
 Descriptions: MARKS****

120 - 1-Machine as per Folio FA 599 Rev: J & Dwg D3391 Rev: J 2-Deburr

150 - 1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803 **Add tangent as per Folio-11**

160 - Form as per Dwg D3391 **Folio -11**

180 - 1-Open Aft cap pilot hole to .208" as per Dwg D3391 2-Drill float bag holes using DT8809 as per Dwg D3391 (All holes) 3-Drill wearplate holes as per Dwg D3391 using DT8878 (Mid Tube) & DT8217 Wearplate Jig . *****Do Not Open To Finished Size***** 4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes. 5- Tranfer holes from D3391-013 for electric step 0.187" hole D3391 section cc-cc 6- Using DT10247 and drill holes for nutplates, Detail DD, open (5) forward wearplate holes 0.375", and c'sink. 7-Open wearplate holes to 0.297" and c'bore as per dwg D3391. ***SIX FARTHEST AFT HOLES ONLY*** 8-C'bore section cc-cc and open to finish size 9- Open float bag holes to 0.328" as per Dwg D3391, and c'sink 10-Deburr

210 - 1- Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: M/37073 exp. date : 08-18 cure time 12hrs as per QSI0015 2- Grind crossbolts flush 3- Back drill using #9 drill 4- Touchup Magnabond 5- Deburr

225 - REALODINE AS PER PAR09-043

230 - PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: 138862 PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT: 138886

250 - 1- Install nutplate using MS20601AD4W4 (qty12) in the six most forward holes and MS20601AD4W9 (qty8) in the four aft holes. Rivet nutplates as per section TT on sheet 11. 2-Install inserts per dwg D3391 3-Install Aft Cap as per Dwg D3391 A/R Sikaflex-241/-291 M/138787 Sikaflex expiry date: 12/12 4- INSTALL WEARPLATE AS PER DWG

004476

8139427

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6014-090	Aluminum Extrusion	1 Ea (1 ea)	90-Start up Operation	R 258
NAS1149C0332R	Washer	10 Ea (10 ea)	90-Start up Operation	5056413
D3670-4-200	Bushing	14 Ea (14 ea)	210-Skidtubes	5077425
ALS4-1032-130	Rivnut	8 Ea (8 ea)	250-HandFinish	5607279
ALS4-1032-225	Rivnut	4 Ea (4 ea)	250-HandFinish	5058138
ALS4-428-165	Insert	4 Ea (4 ea)	250-HandFinish	5058145
AN3C4A	Bolt	6 Ea (6 ea)	250-HandFinish	5068642
AN3C5A	Bolt	4 Ea (4 ea)	250-HandFinish	5057153
D2646	Aft Cap	1 Ea (1 ea)	250-HandFinish	F165010
D3672-1	Washer, Phenolic	2 Ea (2 ea)	250-HandFinish	F150074
D4095-047	Wearpad Aft	1 Ea (1 ea)	250-HandFinish	5025094
D4095-049	Wearpad Aft	1 Ea (1 ea)	250-HandFinish	5018296
MS20601-AD4W3	Rivet	12 Ea (12 ea)	250-HandFinish	5066193
MS20601-AD4W7	Rivet	8 Ea (8 ea)	250-HandFinish	m137148
MS21075L5	Nut Plate	10 Ea (10 ea)	250-HandFinish	5004858

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6014-090	1	21	0
	NAS1149C0332R	10	5,560	0
210-Skidtubes	D3670-4-200	14	48	0
250-HandFinish	ALS4-1032-130	8	14,228	0
	ALS4-1032-225	4	5,407	0
	ALS4-428-165	4	108	0
	AN3C4A	6	2,387	0
	AN3C5A	4	1,859	0
	D2646	1	93	0
	D3672-1	2	1,063	0
	D4095-047	1	23	0
	D4095-049	1	38	0
	MS20601-AD4W3	12	981	0
	MS20601-AD4W7	8	185	0
	MS21075L5	10	174	0

Part Specifications

Specifications could not be found.

Plex 5/14/18 10:33 AM Dart.Gagnon.Michelle

③

DART AEROSPACE LTD		Work Order: 177481
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: J	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.00	✓		Tape	
3.500	+/-0.010	3.501	✓		Vern 08	
Ø3.200	+/-0.010	3.196	✓		BLM 4" 05	
Ø3.750	+/-0.010	3.747	✓		"	
30° x 0.060 chamfer	+/-0.010	.060	✓		Vern 08	
88.93	+/-0.030	88.93	✓		Tape	

Measured by: M.D. P.M.P.	Date: 2018-06-07
Audited by: 23	Date: 18-06-08

HAAS Section						
1.526	+0.000/-0.030	1.516	✓		Vernier	
7.500	+/-0.010	7.502	✓		Vernier	
27.750	+/-0.010	27.750	✓		Tape	
31.750	+/-0.010	31.750	✓		Tape	
35.250	+/-0.010	35.250	✓		Tape	
3.300	+/-0.010	3.299	✓		Vernier	
0.200	+/-0.010	.198	✓		Vernier	
3.520	+/-0.010	3.524	✓		Microscope	
0.687	+0.010/-0.000	.688	✓		Vernier	
R0.062	+/-0.010	R.062	✓		Gage	
Ø0.484	+0.005/-0.001	Ø0.485	✓		Phisage	

Measured by: M.M. 10m	Date: 11 Jun 2018
Audited by: DAS 20	Date: 18-06-13

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	
I	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ	
L	12.11.28	88.93 dimension added	KJ	
M	16.06.23	Dimensions updated per Rev J	KJ	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date :		Step #:		QTY Effective :		MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				
								Completed By
								Lead hand / Supervisor Approval Verification
								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	Past Due ☐							

D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY -041	QTY -043	PART NUMBER	DESCRIPTION
X		D3391-041	FLOAT SKIDTUBE ASSEMBLY
	X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
2	2	D3591-1	BUSHING
4		D3672-3	WASHER
1	1	D4095-041	WEARSHOE
1	1	D4095-043	WEARSHOE
1	1	D4095-045	WEARSHOE
1	1	D4095-047	WEARPAD
1	1	D4095-049	WEARPAD
1	1	D4095-051	WEARSHOE
24	24	AN3C4A	BOLT
4	4	AN3C8A	BOLT
10	10	AN5C7A	BOLT
28	28	NAS1149C0332R	WASHER
10	10	NAS1149C0532R	WASHER
4		MS27039C4-12	SCREW
4		NAS1149C0432R	WASHER

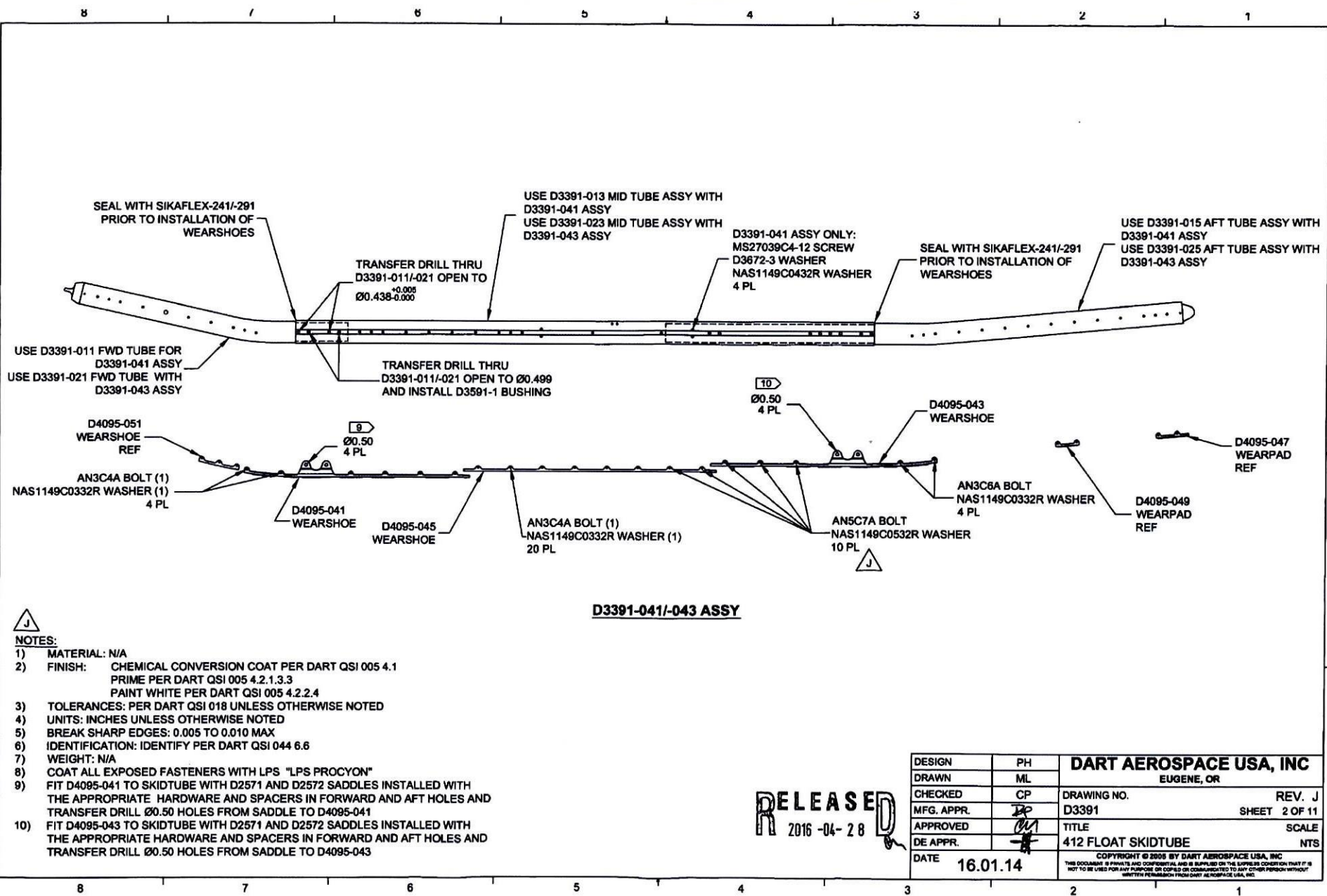
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WITHOUT NOTICE
WORK ORDER
NO. 177481

MAY 14 2018

J	INCORPORATED DSI 9733, REFORMAT DRAWING CHANGED CBORE DEPTH (ZN D2-8, D2-9), REVISED TABLES, REPLACED POWDER COAT WITH PAINT	ML	16.01.14
I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A8-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING, ZN C8 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING, ZN C8 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	06.06.10
A	NEW ISSUE	PH	05.02.07
REV	DESCRIPTION		BY DATE
DESIGN	PH	DART AEROSPACE USA, INC EUGENE, OR	
DRAWN	ML		
CHECKED	CP	DRAWING NO.	REV.
MFG. APPR.		D3391	SHEET 1 OF 11
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	16.01.14	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2016-04-28
ECN 16-516

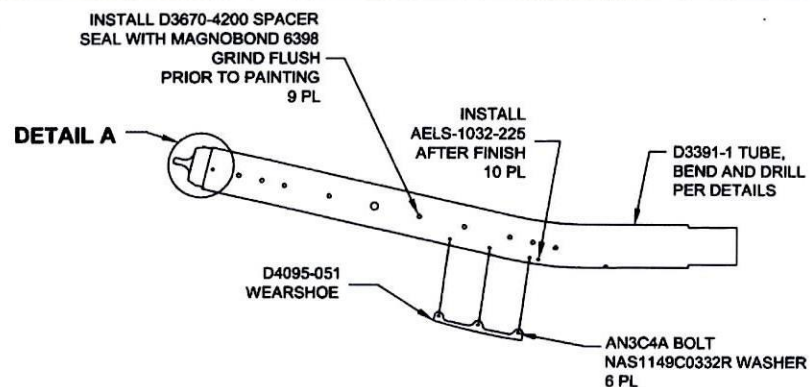


D3391-041/-043 ASSY

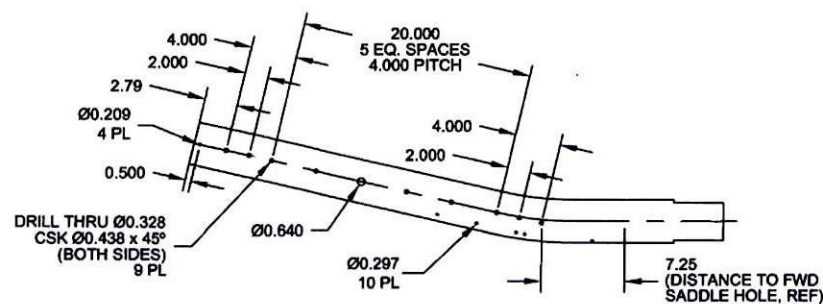
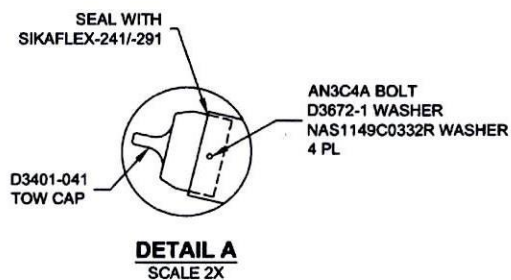
- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME PER DART QSI 005 4.2.1.3.3
PAINT WHITE PER DART QSI 005 4.2.2.4
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.6
 - 7) WEIGHT: N/A
 - 8) COAT ALL EXPOSED FASTENERS WITH LPS "LPS PROCYON"
 - 9) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
 - 10) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

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2016-04-28

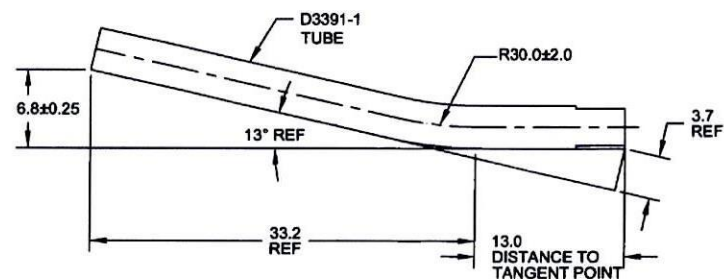
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	DP	D3391	SHEET 2 OF 11
APPROVED	DP	TITLE	SCALE
DE APPR.	DP	412 FLOAT SKIDTUBE	NTS
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D3391-011 FWD TUBE ASSEMBLY
ASSEMBLY DETAIL



D3391-011 DRILLING DETAIL



D3391-011 BENDING DETAIL
(MAKE FROM D3391-1)

D3391-011 FWD TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-011	FWD TUBE ASSEMBLY
1	D3391-1	TUBE
1	D3401-041	TOW CAP
9	D3670-4200	SPACER
4	D3672-1	WASHER
1	D4095-051	WEARSHOE
10	AELS-1032-225	INSERT
10	AN3C4A	BOLT
10	NAS1149C0332R	WASHER

RELEASED
2016-04-28

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.		D3391	SHEET 3 OF 11
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
4 PL

DETAIL B



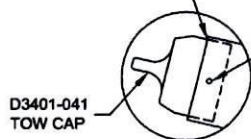
D4095-051
WEARSHOE

INSTALL
AELS-1032-225
AFTER FINISH
10 PL

AN3C4A BOLT
NAS1149C0332R WASHER
6 PL

D3391-021 FWD TUBE ASSEMBLY ASSEMBLY DETAIL

SEAL WITH
SIKAFLEX-241/-291



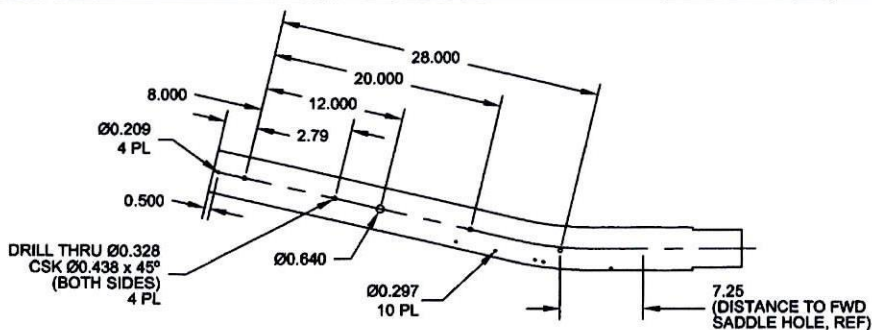
D3401-041
TOW CAP

AN3C4A BOLT
D3672-1 WASHER
NAS1149C0332R WASHER
4 PL

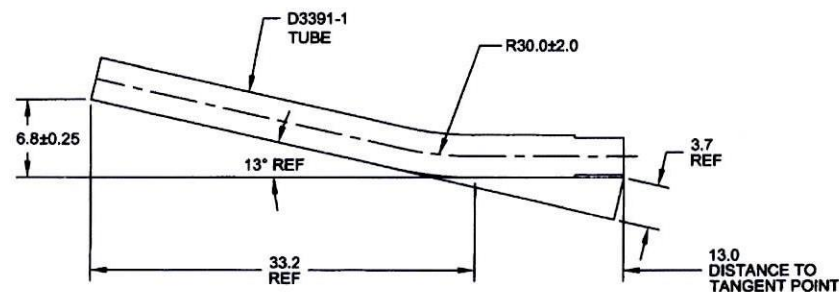
DETAIL B SCALE 2X

D3391-021 FWD TUBE ASSEMBLY PARTS LIST

QTY -021	PART NUMBER	DESCRIPTION
X	D3391-021	FWD TUBE ASSEMBLY
1	D3391-1	TUBE
1	D3401-041	TOW CAP
4	D3670-4200	SPACER
4	D3672-1	WASHER
1	D4095-051	WEARSHOE
10	AELS-1032-225	INSERT
10	AN3C4A	BOLT
10	NAS1149C0332R	WASHER



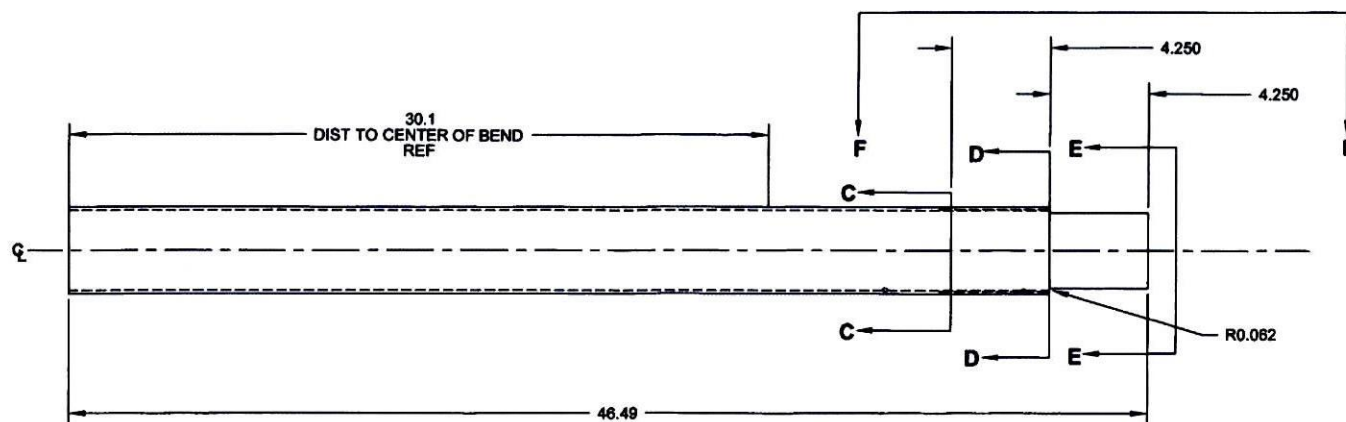
D3391-021 DRILLING DETAIL



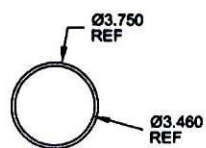
D3391-021 BENDING DETAIL (MAKE FROM D3391-1)

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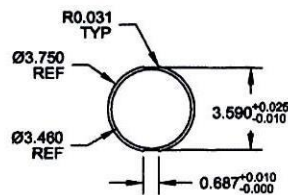
DESIGN	PH	DART AEROSPACE USA, INC	
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MFG. APPR.	TS	D3391	SHEET 4 OF 11
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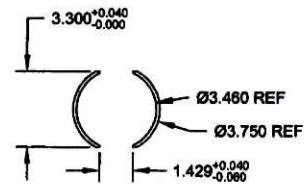
D3391-1 TUBE
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



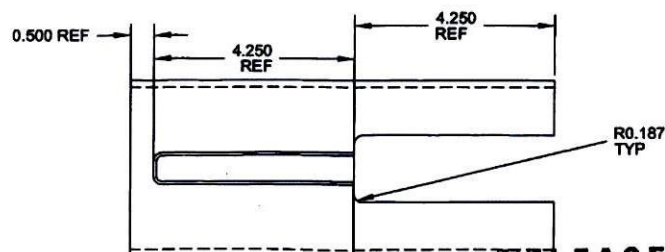
SECTION C-C



SECTION D-D



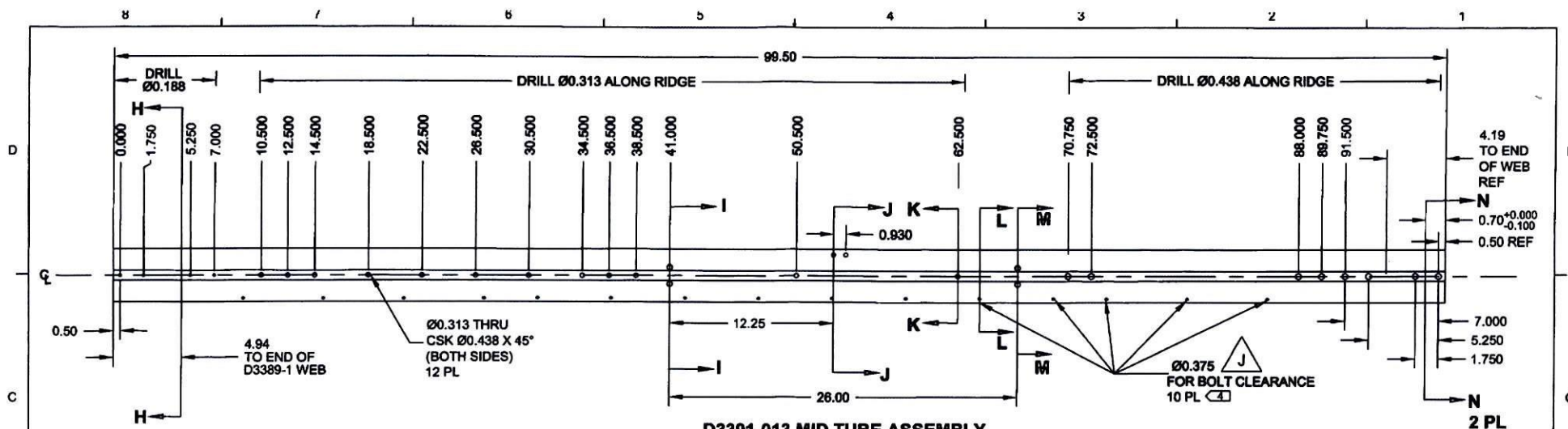
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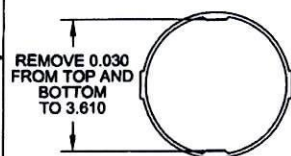
VIEW F-F
SCALE 2X

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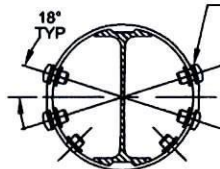
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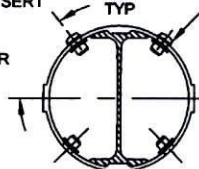
D3391-013 MID TUBE ASSEMBLY



SECTION H-H
SCALE 2X



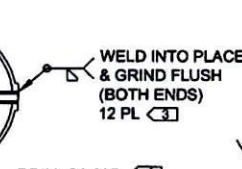
SECTION I-I
SCALE 2X



SECTION J-J
SCALE 2X



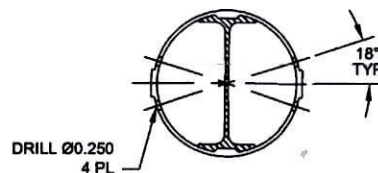
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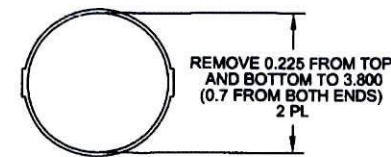
SECTION L-L
SCALE 2X
<4>

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW
4	NAS1149C0332R	WASHER
4	NAS1149C0432R	WASHER



SECTION M-M
SCALE 2X



SECTION N-N
SCALE 2X

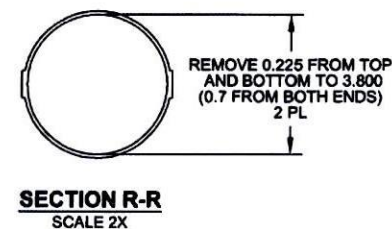
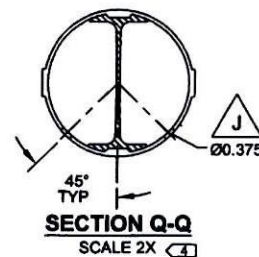
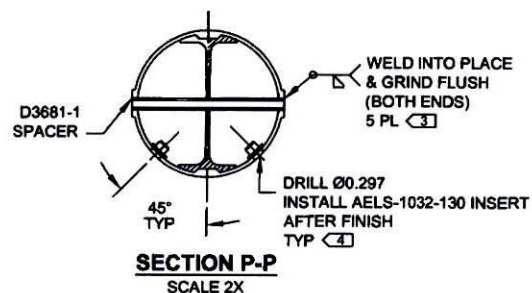
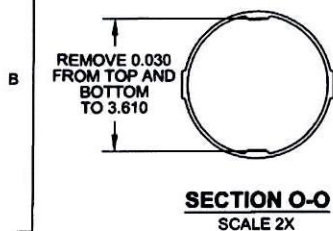
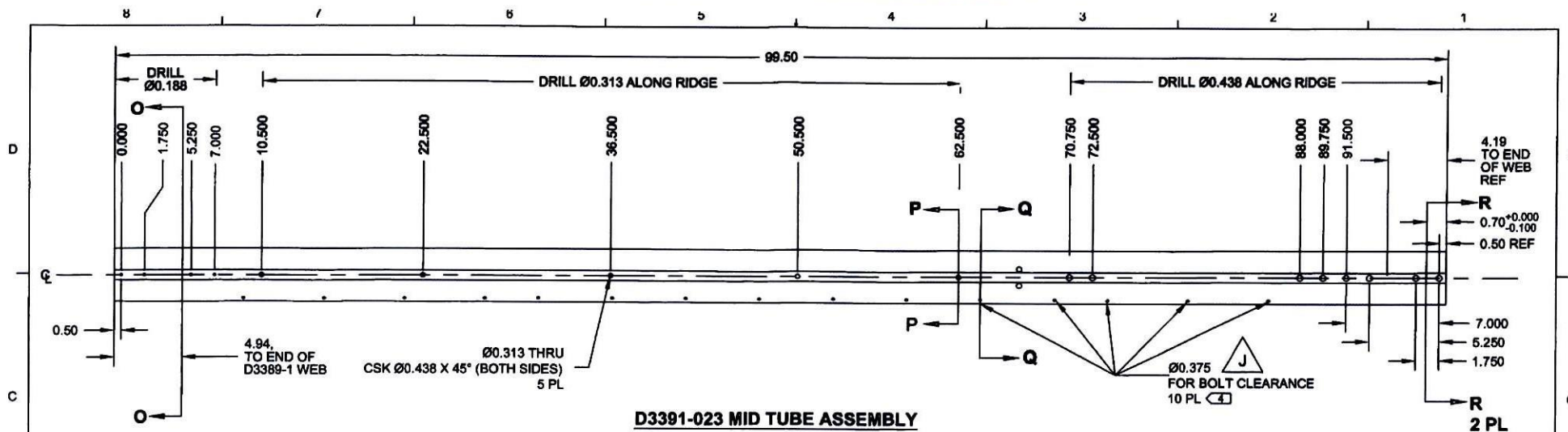


D3391-013 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004
- 4) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. BORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.

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D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

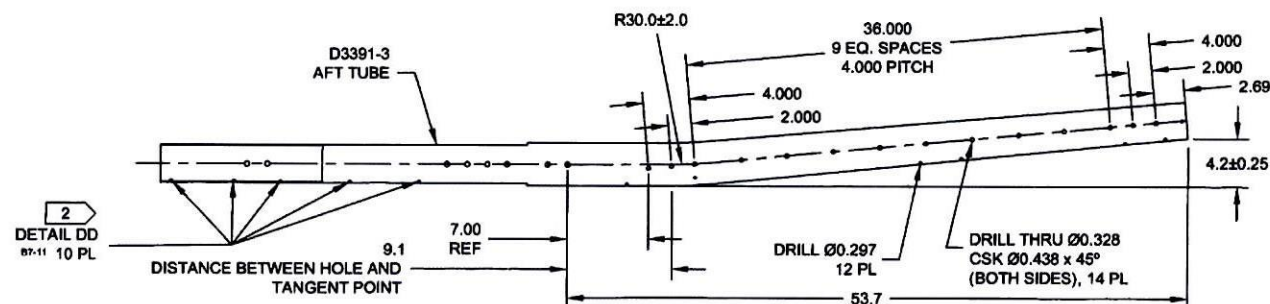
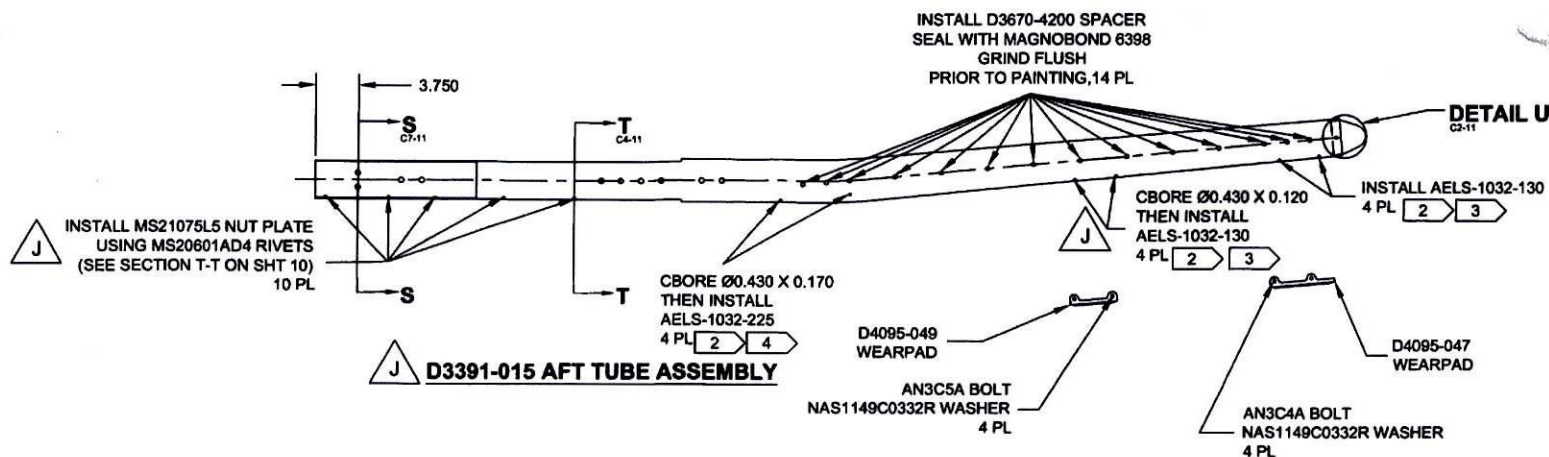


D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004
- 4) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. CBORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.

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D3391-015 AFT TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-015		
X	D3391-015	AFT TUBE ASSEMBLY
1	D2648	AFT CAP
1	D3391-3	AFT TUBE
14	D3670-4200	SPACER
2	D3672-1	WASHER
1	D4095-049	WEARPAD
1	D4095-047	WEARPAD
8	AELS-1032-130	INSERT
4	AELS-1032-225	INSERT
4	AL54-428-165	INSERT
6	AN3C4A	BOLT
4	AN3C5A	BOLT
20	MS20601AD4	RIVET, BLIND
10	MS21075L5	NUT PLATE, FLOATING
10	NAS1149C0332R	WASHER

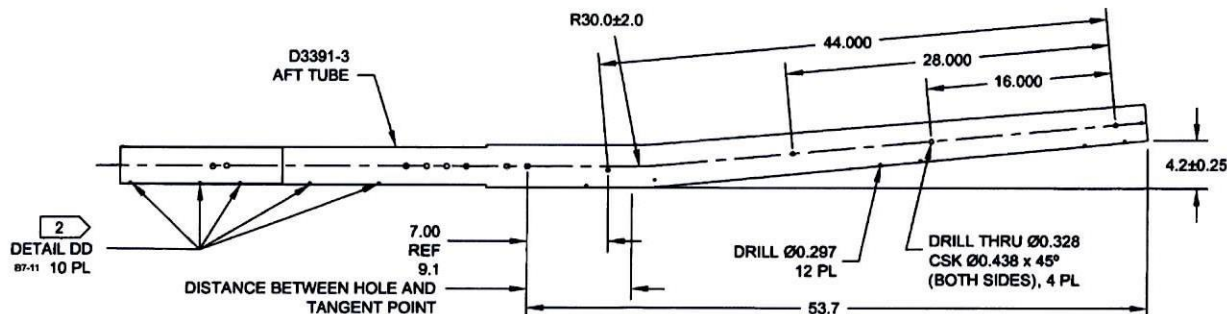
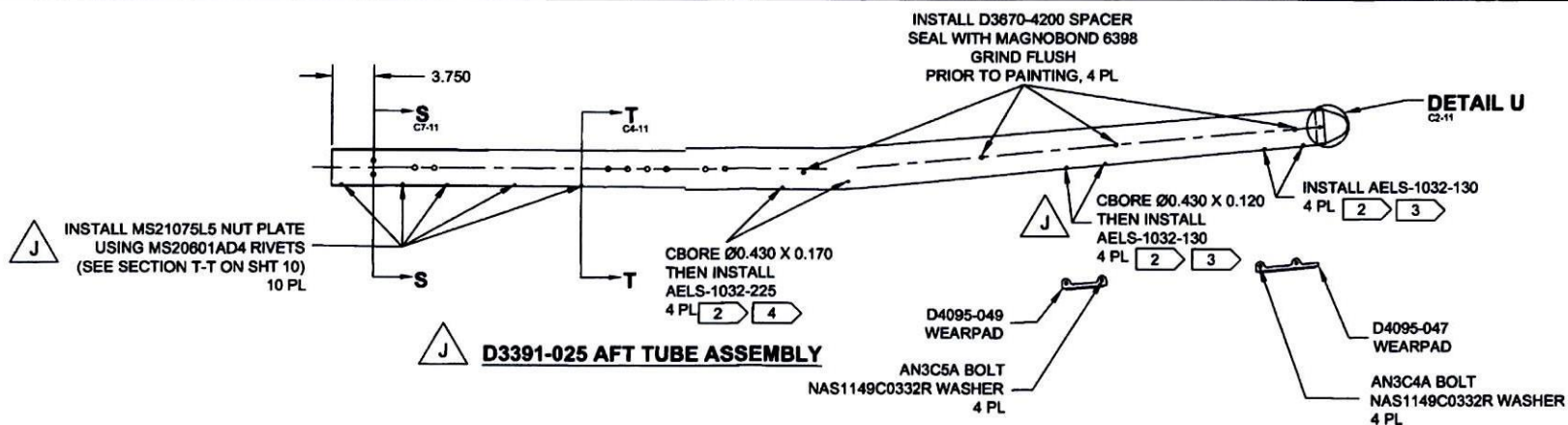
NOTES:

- 1) COAT ALL EXPOSED FASTENERS WITH LPS "LPS PROCYON"
- 2) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. CBORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.
- 3) ENSURE WALL THICKNESS IS BETWEEN 0.070 AND 0.130 BEFORE INSTALLING INSERT
- 4) ENSURE WALL THICKNESS IS BETWEEN 0.130 AND 0.225 BEFORE INSTALLING INSERT

BENDING AND DRILLING DETAIL

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D3391-025 AFT TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-025	AFT TUBE ASSEMBLY
1	D2646	AFT CAP
1	D3391-3	AFT TUBE
4	D3670-4200	SPACER
2	D3672-1	WASHER
1	D4095-049	WEARPAD
1	D4095-047	WEARPAD
8	AELS-1032-130	INSERT
4	AELS-1032-225	INSERT
6	AN3C4A	BOLT
4	AN3C5A	BOLT
20	MS20801AD4	RIVET, BLIND
10	MS21075L5	NUT PLATE FLOATING
10	NAS1149C0332R	WASHER

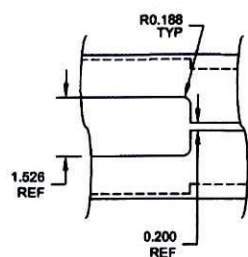
NOTES:

- 1) COAT ALL EXPOSED FASTENERS WITH LPS "LPS PROCYON"
- 2) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. C'BORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED. USE NUT PLATE DRILL JIG IF REQUIRED.
- 3) ENSURE WALL THICKNESS IS BETWEEN 0.070 AND 0.130 BEFORE INSTALLING INSERT
- 4) ENSURE WALL THICKNESS IS BETWEEN 0.130 AND 0.225 BEFORE INSTALLING INSERT

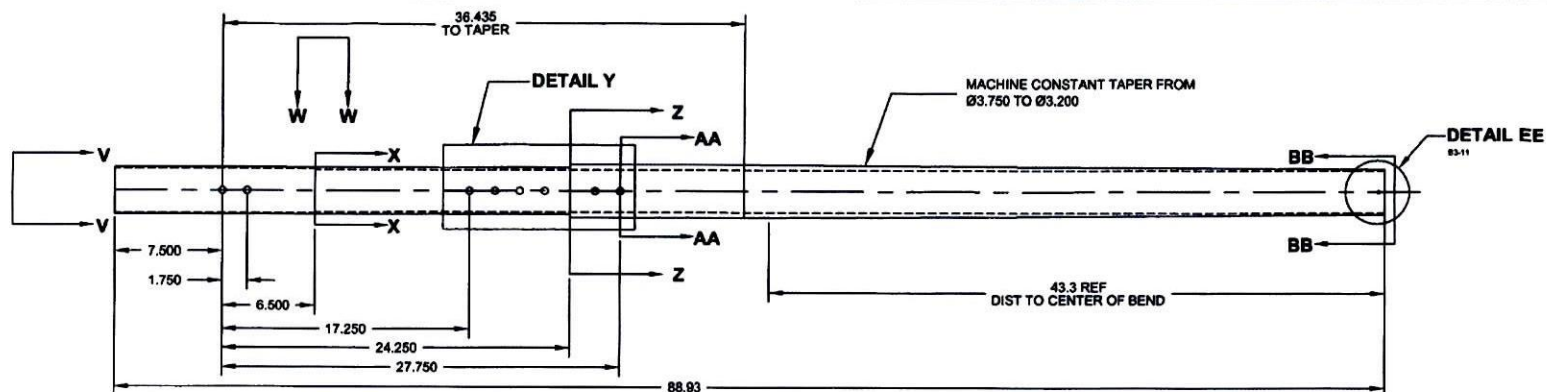
BENDING AND DRILLING DETAIL

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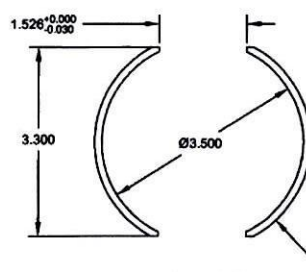
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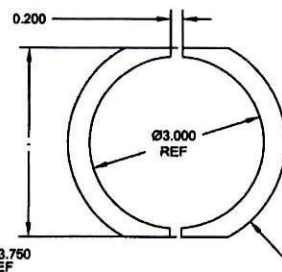
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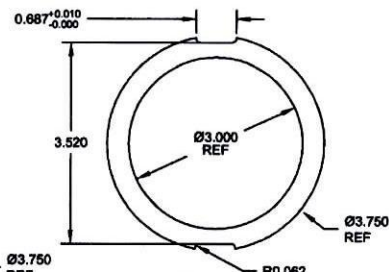
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D8014-090)



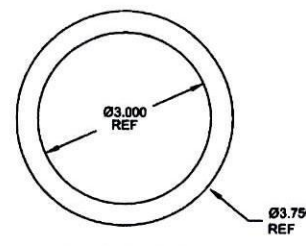
SECTION V-V
SCALE 4X



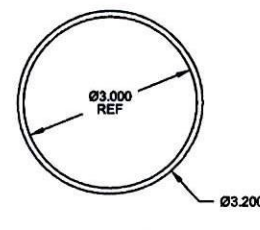
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SCALE 4X



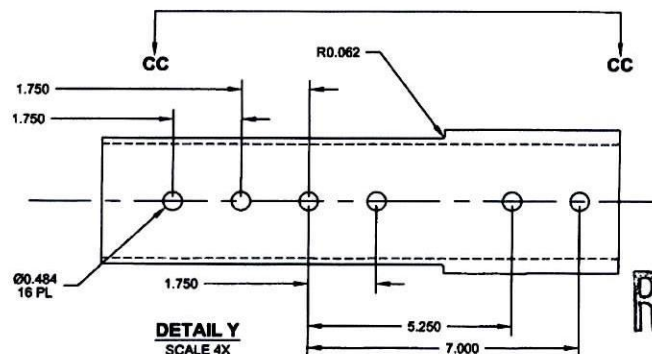
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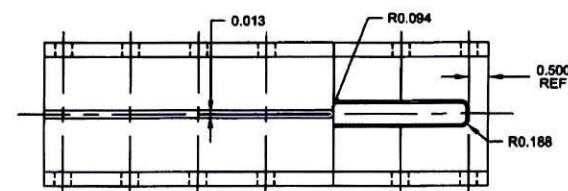
SECTION AA-AA
SCALE 4X



SECTION BB-BB
SCALE 4X



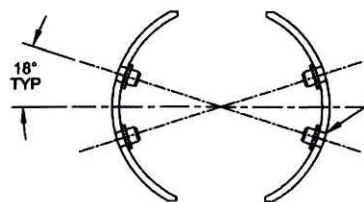
DETAIL Y
SCALE 4X



VIEW CC-CC

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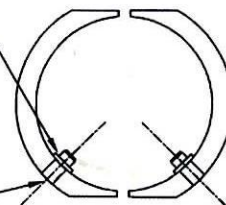
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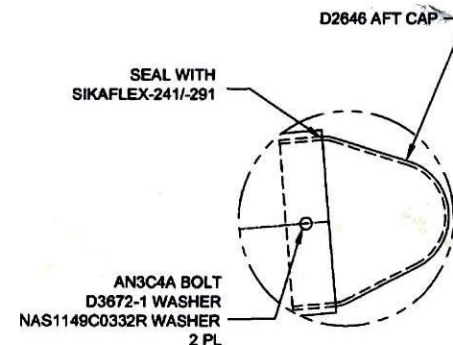
SECTION S-S D6-8.9
SCALE 5X

DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL

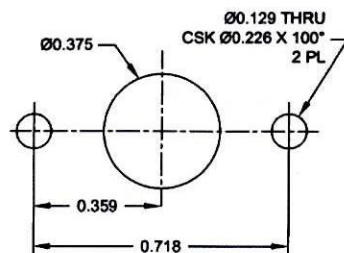
MS21075L5 NUTPLATE
REF
USE DT8217 DRILL TEMPLATE
TO LOCATE HOLES AND OPEN
TO Ø0.375



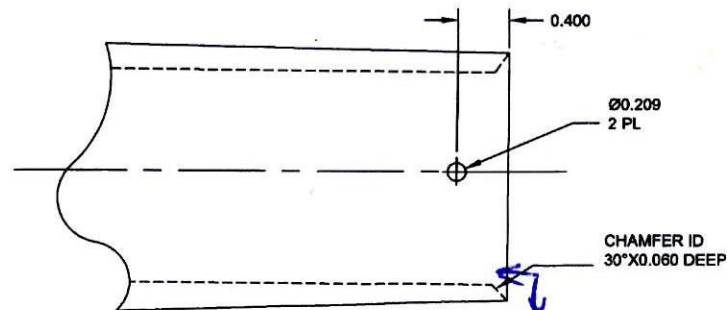
SECTION T-T D6-8.9
SCALE 5X
5 PL



DETAIL U D1-8.9
SCALE 5X



DRILLING DETAIL DD D7-8.9
SCALE 10X
1



DETAIL EE D1-11
SCALE 2X

NOTES:
1) USE INDUSTRY STANDARD NUT PLATE DRILL JIG IF REQUIRED.

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